

Listing of Claims

The below listing of claims will replace all prior versions of claims in the application.

1. (Currently Amended) An image sensor, comprising:
a two-dimensional array of pixel elements, said array of pixel elements outputting pixel data representing an image of a scene; and
a two-dimensional array of selectively transmissive filters superimposed on said two-dimensional array of pixel elements, whereby each pixel element in said array of pixel elements is disposed to capture a first and a second color spectra of visible light,
wherein said two-dimensional array of selectively transmissive filters comprises a two-dimensional array of filter cells, each filter cell superimposed and in registration with each of said pixel elements, each of said filter cells comprising a selectively transmissive filter of a first type and a selectively transmissive filter of a second type formed as four quadrants in an active area of said filter cell; and in each filter cell, said selectively transmissive filter of said first type occupies a first quadrant and a second quadrant diagonal from said first quadrant.
2. (Original) The image sensor of claim 1, wherein said two-dimensional array of pixel elements comprises a two-dimensional sensor array of digital pixels, each of said digital pixels outputting digital signals as pixel data.
3. (Original) The image sensor of claim 2, wherein each of said digital pixels comprises a photodetector generating an output signal; and said image sensor further comprises:
a plurality of analog-to-digital conversion (ADC) circuits located within said array of pixel elements, each of said ADC circuits being connected to one or more photodetectors for converting said output signal to a digitized pixel voltage signal.
4. (Original) The image sensor of claim 0, wherein each of said pixel elements of said image sensor generates analog signals representative of said image as pixel data, and said image sensor further comprises an analog-to-digital converter for digitizing said analog signals.

Claims 5-14: Cancelled.

15. (Currently Amended) An image sensor, comprising:

a sensor array comprising a two-dimensional array of pixel elements, said sensor array outputting digital signals as pixel data representing an image of a scene; and

a two-dimensional array of selectively transmissive filters superimposed on said pixel elements of said sensor array, whereby each pixel element is disposed to capture a first and a second color spectra of visible light,

wherein said two-dimensional array of selectively transmissive filters comprises a two-dimensional array of filter cells, each filter cell superimposed and in registration with each of said pixel elements, each of said filter cells comprising a selectively transmissive filter of a first type and a selectively transmissive filter of a second type formed as four quadrants in an active area of said filter cell; and in each filter cell, said selectively transmissive filter of said first type occupies a first quadrant and a second quadrant diagonal from said first quadrant.

16. (Original) The image sensor of claim 15, wherein each of said pixel elements comprises a photodetector generating an output signal; and said image sensor further comprises:

a plurality of analog-to-digital conversion (ADC) circuits located within said sensor array, each of said ADC circuits being connected to one or more photodetectors for converting said output signal to a digitized pixel voltage signal.

Claims 17-31: Cancelled.

32. (Previously Presented) The image sensor of claim 1, wherein said array of selectively transmissive filter comprises a CMYG (cyan, magenta, yellow, green) filter pattern, each filter cell having the transmissive filter of the first type and the transmissive filter of the second type selected from the CMYG filter pattern.

Claims 33-34: (Cancelled)